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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY Docket NO.	CONFIRMATION NO.
10/713,554	11/14/2003	Takashi Suzuki	3557G-000044	7972

27572 7590 03/30/2005

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EXAMINER

WILLS, MONIQUE M

ART UNIT PAPER NUMBER

1746

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,554

Applicant(s)

SUZUKI ET AL.

Examiner

Monique M Wills

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 7-17 is/are pending in the application.
- 4a) Of the above claim(s) 3-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 10-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Foreign Priority Documents

The Japanese foreign priority document(s) 2001-145587, filed May 15, 2001 and submitted under 35 U.S.C. § 119 (a)-(d), has NOT been received.

Election/Restrictions

Applicant's election of Group I, claims 1, 2 and 7-17 is acknowledged. Claims 3-6 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method of production of a positive electrode material, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on November 14, 2003.

Claim Objections

Claims 7-17 are objected to because of the following informalities: the claims depend on withdrawn claims 3-6. Appropriate correction is required.

Allowable Subject Matter

Claims 10-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 10-13 would be allowable over the prior art of record, because the prior art is silent to a non-aqueous electrolyte secondary battery comprising a separator interposed between electrodes in opposite polarity, in such a way that the periphery of the plane of the negative electrode facing to the positive electrode is being projected to the plane of the positive electrode, and is surrounded by the periphery of the plane of the positive electrode.

Claims 14-17 would be allowable over the prior art of record, because the prior art is silent to a non-aqueous electrolyte secondary battery comprising a wound electrode assembly, wherein the negative electrode has a region within its innermost winding region with a first margin in the lengthwise direction facing the inner periphery of the winding part such that it projects from the end at the innermost winding region of the negative electrode, and a second margin in the lengthwise direction facing to the outer periphery of the winding part such that it projects from the end at the outermost winding region of the negative electrode, and a third margin and a fourth margin formed such that the ends in the widthwise direction of the positive electrode project from both ends positioned in the widthwise direction of the negative electrode.

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Yamahira et al. JP 08-162095.

In re claim 1, Yamahira teaches a nonaqueous electrolyte secondary battery comprising a positive electrode formed from boronized graphite material with a born content of 2.5 to 4.0 wt%. See Abstract. The negative electrode occludes and releases lithium (par. 18). The electrolyte contains a lithium salt (par. 19). Therefore, the instant claim is anticipated by Yamahira.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto et al. JP 2001-106519.

In re claim 1, Yamamoto teaches a nonaqueous electrolyte secondary battery comprising a positive electrode formed from boronized graphite material with a born content of 0.001-5 wt%. See Abstract. The negative electrode occludes and releases lithium (par. 2).

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The electrolyte contains a lithium salt (par. 86). Therefore, the instant claim is anticipated by Yamamoto.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 & 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Murai JP 11-007943.

In re claim 1, Murai teaches a non-aqueous electrolyte secondary battery comprising a positive electrode formed from boronized graphite material with a born content of .01 to 40 wt%. See Abstract. The negative electrode occludes and releases lithium (par. 3). The electrolyte contains a lithium salt (par. 12). With respect to claim 8, the porosity of the electrode is 0.25 (par. 11). Therefore, the instant claims are anticipated by Murai.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1, 2 & 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyazawa JP 2000-313609.

In re claim 1, Miyazawa teaches a non-aqueous electrolyte secondary battery comprising a positive electrode formed from boronized graphite material with a born content of 0.1 to 7wt%. See Paragraph 31. The negative electrode occludes and releases lithium (par. 2). The electrolyte contains a lithium salt (par. 59).

With respect to claim 2, the positive electrode further contains silicon in the amount of 0.1 to 30wt %. See Paragraph 53.

With respect to claim 7, the d(002) spacing is less than 3.37 angstroms, with a peak intensity of 188 eV. The limitation in claim 7 with respect to a wavelength region of $1580 \pm 100 \text{ cm}^{-1}$, is considered an inherent property of the boronized graphite material set forth in the prior art, because Miyazawa teaches the same boronized graphite material employed by Applicant. Furthermore, "products of identical chemical composition can not have mutually exclusive properties. "A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658(Fed. Cir. 1990). In the instant case, the boronized graphite material of Miyazawa employees the instant wavelength region because it possesses identical chemical composition set forth by Applicant.

Therefore, the instant claims are anticipated by Miyazawa.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazawa JP 2000-313609.

Miyazawa teaches a boronized graphite material as described in the § 102 rejection hereinabove.

The reference is silent to an electrode porosity of 0.2 to 0.6.

However, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to employ an electrode porosity of 0.2 to 0.6, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The skilled artisan recognizes that the porosity effects utilization of the electrode.

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

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If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Michael Barr, may be reached at 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MW

3/16/05

A handwritten signature in black ink, appearing to read 'Michael Barr', with a long horizontal flourish extending to the right.

**MICHAEL BARR
SUPERVISORY PATENT EXAMINER**